



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,330	06/23/2003	Kyung-Geun Lee	1293.1633	6586

49455 7590 10/31/2006

STEIN, MCEWEN & BUI, LLP  
1400 EYE STREET, NW  
SUITE 300  
WASHINGTON, DC 20005

EXAMINER
----------

DANIELSEN, NATHAN ANDREW

ART UNIT	PAPER NUMBER
----------	--------------

2627

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/600,330

Applicant(s)

LEE ET AL.

Examiner

Nathan Danielsen

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

1. Claims 1-38 are pending.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 8-13, 15-27, and 31-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Ito et al (US Patent 5,881,032, hereinafter Ito).

Regarding claims 1 and 12, Ito discloses an information storage medium (and associated method of recording/reproducing to/from it) comprising a user data area, wherein information about the user data area, where user data is recorded, is recorded in at least one of an area right before and an area right after a basic recording unit of the user data area (col. 2, lines 6-11 and figure 11).

Regarding claims 2 and 13, Ito discloses where the basic recording unit of the user data area is one of a physical cluster, an error correction code (ECC) block, a sector, and a frame (col. 2, lines 6-11 and figure 11).

Regarding claim 19, Ito discloses where the information about the user data area is recorded in at least one of a run-in area (header in figure 11) and a run-out area (ECC in figure 11) that are right before and after the physical cluster, respectively (figure 11).

Regarding claims 8, 15, and 20, Ito discloses where the information storage medium has at least two information storage layers (figures 1D-4 and 12), and the information about the user data area is recorded in at least one of the area right before and the area right after the basic recording unit of the user data area in different patterns for the different information storage layers (see citation for claims 1 and 12 in addition to figures 3 and 4 where the sector addresses increase from lead-in to lead out areas on layer one and continue according to the solid black lines in the positive sector address direction).

Regarding claims 10, 17, and 22, Ito discloses where the information about the user data area is storage layer information (col. 2, lines 7-8; where each layer has a predetermined range of address as shown in figures 3 and 4).

Regarding claims 9, 11, 16, 18, 21, and 23, Ito discloses where the information about the user data area is recorded using addresses (col. 2, lines 7-8; where each layer has a predetermined range of address as shown in figures 3 and 4).

Regarding claims 24-26, Ito discloses the information storage medium is one of recordable and reproduction-only optical discs (inherent as all discs fall into either of these categories unless so badly damaged as it becomes impossible record/reproduce to/from them; additionally, Ito discloses where user data recorded to the data blocks shown in figure 13D and where Ito's invention can only reproduce information from optical discs (title)).

Regarding claim 27, Ito discloses where the information about the user data area is recorded using one or more addresses of the ECC block (col. 2, lines 6-11 and figure 11).

Regarding claim 31, Ito discloses where the different patterns are one of different consecutive patterns of identical intervals and different patterns of different sized intervals (inherent in col. 2, lines 6-11 and figure 11).

Regarding claim 32, Ito discloses a method of operating a storage medium having a user data area, the method comprising:

- accessing information about the user data area, where user data is recorded, from at least one of
  - an area right before and an area right after a basic recording unit of the user data area (inherent in col. 8, lines 39-42); and

- operating the storage medium based on the accessed information (inherent in col. 8, lines 39-42).

Regarding claim 33, Ito discloses where the method of claim 32 further comprises recognizing a layer of the storage medium based on the accessed information, wherein the operating of the storage medium includes recording and/or reproducing data with respect to the layer (inherent in the different range of addresses assigned to each layer, as illustrated by figures 3 and 4).

Regarding claim 34, Ito discloses where the recognizing of the layer comprises recognizing the layer in response to the accessed information belonging to a predetermined group of addresses (inherent in the different range of addresses assigned to each layer, as illustrated by figures 3 and 4).

Regarding claim 35, Ito discloses where the method of claim 32 further comprises identifying a desired layer of the storage medium based on ranges to which the accessed information belongs (inherent in the different range of addresses assigned to each layer, as illustrated by figures 3 and 4).

Regarding claim 36, Ito discloses where the identifying of the desired layer comprises:  
recognizing a storage layer of the storage medium as the desired layer in response to the  
accessed information belonging to a predetermined range (inherent in the different range  
of addresses assigned to each layer, as illustrated by figures 3 and 4); and  
in response to the accessed information not belonging to the predetermined range, accessing  
another storage layer of the storage medium so as to determine whether accessed  
information thereof belongs to the predetermined range (col. 16, line 30 through col. 17,  
line 4 and figure 8).

Regarding claim 37, Ito discloses where the operating of the storage medium includes recording and/or reproducing data with respect to the desired layer (inherent in a reproducing device).

Regarding claim 38, Ito discloses where the method of claim 32 further comprises identifying storage layers of the storage medium, wherein the identifying of the storage layers comprises:  
recognizing a first layer of the storage layers in response to the accessed information belonging  
to a first predetermined range (col. 16, line 30 through col. 17, line 4 and figure 8);  
in response to the accessed information not belonging to the first predetermined range, accessing  
a second layer of the storage layers so as to determine whether accessed information  
thereof belongs to a second predetermined range (col. 16, line 30 through col. 17, line 4  
and figure 8);  
recognizing the second layer of the storage layers in response to accessed information thereof  
belonging to the second predetermined range (col. 16, line 30 through col. 17, line 4 and  
figure 8); and

in response to the accessed information of the second layer not belonging to the second predetermined range, accessing another layer of the storage layers so as to determine whether accessed information thereof belongs to the second predetermined range (col. 16, line 30 through col. 17, line 4 and figure 8).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-7, 14, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito, in view of Maeda (US Patent 5,337,295).

Regarding claims 3 and 14, Ito discloses everything claimed, as applied to claims 2 and 13, respectively. Additionally, Ito discloses where the information about the user data area is recorded in at least one of a run-in area (header in figure 11) and a run-out area (ECC in figure 11) that are right before and after the physical cluster, respectively (figure 11). However, Ito fails to disclose where the basic recording unit of the user data area is a physical cluster.

In the same field of endeavor, Maeda discloses where the basic recording unit of the user data area is a physical cluster (linking sector L4 in figure 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included linking areas between physical clusters, as taught by Maeda, for the purpose of storing sub-data used for avoiding adverse effects on main data caused by interleaving (col. 9, lines 12-14).

Regarding claim 4, Ito discloses everything claimed, as applied to claim 3. Additionally, Ito discloses where the information storage medium has at least two information storage layers (figures 1D-4 and 12), and the information about the user data area is recorded in at least one of the area right before

Art Unit: 2627

and the area right after the basic recording unit of the user data area in different patterns for the different information storage layers (see citation for claims 1 and 12 in addition to figures 3 and 4 where the sector addresses increase from lead-in to lead out areas on layer one and continue according to the solid black lines in the positive sector address direction).

Regarding claim 6, Ito discloses everything claimed, as applied to claim 3. Additionally, Ito discloses where the information about the user data area is storage layer information (col. 2, lines 7-8; where each layer has a predetermined range of address as shown in figures 3 and 4).

Regarding claims 5 and 7, Ito discloses everything claimed, as applied to claims 3 and 6, respectively. Additionally, Ito discloses where the information about the user data area is recorded using addresses (col. 2, lines 7-8; where each layer has a predetermined range of address as shown in figures 3 and 4).

Regarding claim 28, Ito discloses everything claimed, as applied to claim 3. Additionally, Ito discloses the information storage medium is one of recordable and reproduction-only optical discs (inherent as all discs fall into either of these categories unless so badly damaged as it becomes impossible record/reproduce to/from them; additionally, Ito discloses where user data recorded to the data blocks shown in figure 13D and where Ito's invention can only reproduce information from optical discs (title)).

Regarding claim 29, Ito discloses everything claimed, as applied to claim 3. Additionally, Ito discloses where each of the information storage layers includes a lead-in area (lead-in areas 1a in figures 1D-4), a lead-out area (lead-out areas 1b in figures 1D-4) and the user data area (unlabeled regions between lead-in areas 1a and lead-out areas 1b in figures 1D-4).

Regarding claim 30, Ito discloses everything claimed, as applied to claim 4. Additionally, Ito discloses where the different patterns are one of different consecutive patterns of identical intervals and different patterns of different sized intervals (inherent in col. 2, lines 6-11 and figure 11).

***Response to Arguments***

6. Applicant's arguments filed 06 September 2006 with respect to claims 1, 2, 8-13, and 15-38 have been fully considered but they are not persuasive.

a. Applicant argues that "information about a user data area of Ito '032 is recorded in a header of each basic recording unit, and not in at least one of an area right before and an area right after a basic recording unit of the user data area" (page 10). The examiner disagrees. The header shown in figure 11 is used to identify the location on the disc where user data is recorded (col. 2, lines 7-11), which is exactly what Applicant claims in claims 1 and 12. Further, in relation to claims 2 and 13 in combination with claims 1 and 12, the header is shown in figure 11 is recorded in the area right before the data area, which is well known in the art to be composed of multiple frames, and, as the case in Maeda, multiple blocks/sectors (figures 2 and 3). Therefore, the rejection of claims 1, 2, 12, and 13 under 35 U.S.C. § 102(b) based on Ito is still deemed to be proper.

b. Applicant further argues that "there is no disclosure anywhere in Ito '032 of Applicants' claimed 'accessing information about the user data area, where user data is recorded, from at least one of an area right before and an area right after a basic recording unit of the user data area' and 'operating the storage medium based on the accessed information' as expressly defined in base claim 32" (page 12). The examiner disagrees. Applicant's claimed "information about the user data area" is interpreted to be the same as the physical location of that data as indicated by the address information included in the header of Ito. This address information is also used by the apparatus of Ito to not only determine the recording/reproduction location on a recording/reproduction layer of an optical disk, but also the recording/reproduction layer being recorded/reproduced. Therefore, the rejection of claim 32 under 35 U.S.C. § 102(b) based on Ito is still deemed to be proper.



Art Unit: 2627

**Conclusion**

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

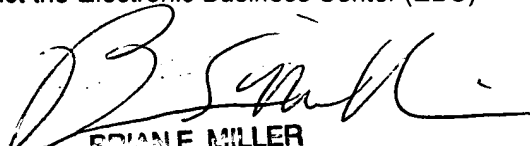
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 8:30 AM - 4:30 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A.L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nathan Danielsen  
10/18/2006

ND

  
BRIAN E. MILLER  
PRIMARY EXAMINER